

WHAT IS CLAIMED IS:

1 1. A network connection system comprising:
2 a physical layer integrated circuit processing
3 network data transmissions;
4 a transformer connected to the physical layer
5 chip;
6 a network transmission medium interface directly
7 connected to secondary windings of the transformer; and
8 a first portion of a docking connector also
9 directly connected to the secondary windings.

1 2. The network connection system according to claim
2 1, wherein the first portion of the docking connector is
3 connected to signal traces between the transformer and the
4 network transmission medium interface.

1 3. The network connection system according to claim
2 1, wherein the physical layer integrated circuit
3 selectively provides a 10/100/1000BT connection to an
4 Ethernet network.

1 4. The network connection system according to claim
2 1, wherein the network transmission medium interface is a
3 first network transmission medium interface and wherein a
4 second portion of the docking connector is coupled to a
5 second network transmission medium interface.

1 5. The network connection system according to claim
2 4, wherein the first and second network transmission medium
3 interfaces are RJ-45 connectors.

1 6. The network connection system according to claim
2 4, wherein the first network transmission medium interface
3 and the first portion of the docking connector are disposed
4 within a mobile computer and the second network
5 transmission medium interface and the second portion of the
6 docking connector are disposed within a docking station
7 selectively receiving the mobile computer.

1 7. A mobile computer system including the network
2 connection system according to claim 6, the mobile computer
3 system further comprising:

4 a processor within the mobile computer coupled by
5 one or more interface devices to the physical layer
6 integrated circuit; and

7 connections within the docking station for one or
8 more peripherals including a monitor, a keyboard or a
9 mouse.

1 8. A mobile computer including the network
2 connection system according to claim 1, the mobile computer
3 further comprising:

4 a processor coupled by one or more interface
5 devices to the physical layer integrated circuit.

1 9. A method of providing a network connection
2 comprising:

3 processing network data transmissions within a
4 physical layer integrated circuit connected to a
5 transformer, wherein a network transmission medium
6 interface and a first portion of a docking connector are
7 directly connected to secondary windings of the
8 transformer.

1 10. The method according to claim 9, further
2 comprising:

3 driving signals on signal traces between the
4 transformer and the network transmission medium interface,
5 wherein the first portion of the docking connector is
6 connected to the signal traces.

1 11. The method according to claim 9, further
2 comprising:

3 selectively providing a 10/100/1000BT connection
4 to an Ethernet network in the physical layer integrated
5 circuit.

1 12. The method according to claim 9, further
2 comprising:

3 connecting the first portion of the docking
4 connector to a second portion of the docking connector,
5 wherein the network transmission medium interface is a
6 first network transmission medium interface and wherein the
7 second portion of the docking connector is coupled to a
8 second network transmission medium interface.

1 13. The method according to claim 12, wherein the
2 first and second network transmission medium interfaces are
3 RJ-45 connectors.

1 14. The method according to claim 12, wherein the
2 first network transmission medium interface and the first
3 portion of the docking connector are disposed within a
4 mobile computer and the second network transmission medium
5 interface and the second portion of the docking connector
6 are disposed within a docking station selectively receiving
7 the mobile computer.

1 15. The method according to claim 9, further
2 comprising:

3 checking for concurrent connection of the network
4 transmission medium interface to a network transmission
5 medium and coupling of the first portion of the docking
6 connector to a network transmission medium; and

7 responsive to detecting both connection of the
8 network transmission medium interface to a network
9 transmission medium and coupling of the first portion of
10 the docking connector to a network transmission medium,
11 issuing an alert.

1 16. A network connection system comprising:
2 a docking connector having first and second
3 portions configured to be selectively engaged to provide an
4 electrical connection;
5 first and second network connection interfaces,
6 wherein the second network connection interface is coupled
7 to the second portion of the docking connector; and
8 a transformer connected to a network physical
9 layer chip, wherein secondary windings of the transformer
10 are connected directly connected to the first network
11 connection interface and the first portion of the docking
12 connector.

1 17. The network connection system according to claim
2 16, further comprising:
3 impedance compensation within the connection
4 between the second portion of the docking connector and the
5 second network connection interface.

1 18. The network connection system according to claim
2 17, wherein the network physical layer integrated circuit
3 selectively provides a 10/100/1000BT connection to an
4 Ethernet network.

1 19. The network connection system according to claim
2 18, wherein the first and second network connection
3 interfaces are RJ-45 connectors.

1 20. The network connection system according to claim
2 19, wherein the first network connection interface, the
3 first portion of the docking connector, the transformer,
4 and the network physical layer integrated circuit are
5 disposed within a mobile computer, and wherein the second
6 network connection interface and the second portion of the
7 docking connector are disposed within a docking station.